

**Integrated Global Observing Strategy (IGOS) Summary**  
Prepared for the Earth Observation Summit and the GEO Meeting  
Washington, D.C.  
July 31; August 1-2, 2003

**Background:**

The IGOS Partnership was created in June 1998 as a result of an informal meeting of potential Partners held in Paris, followed by a formal exchange of letters among the 13 founding Partners. The Partnership seeks to provide a comprehensive framework to harmonize the common interests of the major space-based and *in situ* systems for global observation of the Earth. Its aim has been to provide an over-arching strategy for conducting observations relating to climate and atmosphere, oceans and coasts, the land surface and the Earth's interior. The Partners, through IGOS, have built upon the strategies of existing international global observing programmes, and upon current achievements, in seeking to improve observing capacity and deliver observations in a cost-effective and timely fashion. Efforts are directed to those areas where satisfactory international arrangements and structures do not currently exist.

**Currently, the IGOS Partnership consists of:**

- Sponsors of the Global Observing Systems (ICSU, FAO, UNESCO, UNEP, IOC/UNESCO, WMO);
- Global Observing Systems (GCOS, GOOS, GTOS and GOS/GAW);
- Committee on Earth Observation Satellites (CEOS);
- International Group of Funding Agencies (IGFA);
- International Geosphere-Biosphere Programme (IGBP) Programme Office;
- World Climate Research Programme (WCRP) Programme Office.

Cooperation between the Partners reflects the principle of "best efforts" and no additional financial obligation or exchange of funds except with the mutual consent of relevant Partners.

**IGOS Partners have agreed that:**

- **The principal objectives of the strategy are to address how well user requirements are being met by the existing mix of Earth observations, including those of the global observing systems, and how they could be met in the future through better integration and optimization of remote sensing (especially space-based) and *in situ* systems;**
- The strategy serves as guidance to those responsible for defining and implementing individual observing systems. The implementation of the strategy; i.e., the establishment and maintenance of the components of an integrated global observing system, remains with the governments and organizations with commitments expressed, for example, within the governing councils of the observing systems' sponsors;

## In order to strengthen cooperation within IGOS, Partners involved in IGOS also:

- exchange information on the Partners' relevant activities;
- promote dialogue between the space agencies and *in situ* observation communities;
- identify gaps and seek to address IGOS-related user requirements;
- identify requirements to strengthen institutional capacity to make integrated global observations;
- carry out specific activities to develop individual components of the strategy;
- identify and suggest projects that complement and demonstrate the value of IGOS; and,
- promote all aspects of strategy implementation, among national and international agencies, as well as different user groups.

## IGOS Theme Process:

The Theme approach used to define the overall strategy recognises that in reality it is impossible, in one step and for all eventualities, to complete the exercise of defining all the necessary observational requirements and hence the observational systems, data handling, processing and analysis infrastructure for a comprehensive global system. The Theme approach allows the coherent definition and development of an overall global strategy whilst recognising the different state and stage of development in different areas. Themes have not *a priori* been defined, rather it is anticipated that the user communities will identify areas that require action and bring forward Themes for agreement and action.

## Status of IGOS Themes:

<b>THEMES</b>	<b>Lead Partner</b>	<b>Other Involved Partners</b>	<b>Involved Space Agencies</b>	<b>Observing System(s)</b>
<b>Ocean</b>	CEOS, GOOS	IOC, WMO, others	NASA, CNES, others	GOOS
<b>Carbon</b>	IGBP	GTOS, GOOS	NASA, others	GTOS, GAW, GOOS, TBD
<b>Water</b>	WCRP	CEOS, others	NASDA, ESA	TBD
<b>GeoHazards</b>	UNESCO, CEOS	others	ESA	TBD
<b>Atmospheric Chemistry</b>	WMO	CEOS	ESA, NASA, others	GAW, TBD
<b>Coastal</b>	CEOS, GOOS, GTOS	IGBP, UNEP	NASA, NOAA, others	GOOS, GTOS
<b>Coral Sub Theme</b>	UNEP (Coral)	CEOS, others	NOAA, others	GOOS, GTOS

Six themes are at various stages of development within the IGOS Partnership. Currently, the Ocean Theme is undergoing a “rolling review”, which is an evaluation of its earlier Ocean Theme Report on observation requirements. The Global Carbon Cycle Theme, the Global Water Cycle Theme, and the GeoHazards Theme are finalizing their Theme Reports based on

feedback received at the 10<sup>th</sup> IGOS Partners' Meeting in Paris last June, and are planning to present their individual Theme Reports to the IGOS Partners in November 2003 at a special ad-hoc IGOS meeting in Colorado Springs. The Atmospheric Chemistry Theme is still drafting its Theme Report, and the newly adopted Coastal Theme will have its first Team meeting in November to begin the process of drafting its Theme Report outline. Partners approved a Coral Reef Sub Theme Report with that Sub Theme to be linked to the Coastal Theme.

### **Pursuit of Emerging Themes within IGOS:**

To help focus resources in areas where maximum benefits can be achieved, IGOS is very careful about the adoption of new Themes. Nevertheless, if consensus and commitment for implementation exists among IGOS Partners to warrant the adoption of a new Theme, then the Partners are not constrained in the number of Themes they choose to implement. At the recent 10<sup>th</sup> IGOS Partners Meeting in Paris, the IGOS Partners agreed to examine a number of potential Theme areas, and determine if IGOS should propose additional Themes to complement its suite of existing Themes. One Theme area discussed of particular interest to the IGOS Co-Chairs and others focused on socio-economic issues and their relationship to Earth observations. Partners at the 10<sup>th</sup> IGOS Meeting agreed to examine potential new Theme areas and discuss them at the special ad-hoc IGOS meeting in November 2003.

### **Structure of IGOS**

The IGOS Partnership has two Co-Chairs, one of whom is the CEOS Chair, and the other is nominated by consensus among the other Partners. Each Co-Chair is nominated for a period of one year. Currently, the IGOS Co-Chairs are Mr. Gregory Withee of NOAA (also the Chair of CEOS) and Dr. Dietrich Leihner of FAO. Mr. Withee's Co-Chair duties will end in November 2003 when he passes the CEOS Chair to China, while Dr. Leihner's will continue until the 11<sup>th</sup> IGOS Partners' Meeting in early June 2004.

### **From a Strategy to a System**

Five years ago, IGOS set out to establish an integrated Earth observation strategy. Today, with several Theme Reports being finalized or in the process of implementation, IGOS has made significant progress towards the development of an integrated Earth observation system. IGOS has also developed a unique forum for coordination and communication within the Earth observation community where IGOS Partners have worked together to better understand and investigate the Earth. IGOS welcomes the opportunity to see its integrated global observation strategy contribute directly to the development of a global observation system.